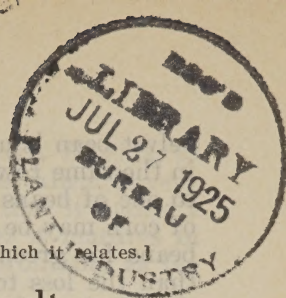
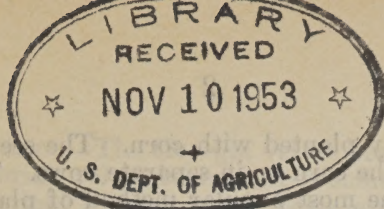


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S. D.—94. [This leaflet is distributed only with the seeds to which it relates.]

## United States Department of Agriculture,

### BUREAU OF PLANT INDUSTRY,

New and Rare Seed Distribution,

WASHINGTON, D. C.

### VELVET BEANS.

**OBJECT OF THE DISTRIBUTION.**—The distribution of new and rare seeds has for its object the dissemination of new and rare crops, improved strains of staple crops, and high-grade seeds of crops new to sections where the data of the department indicate such crops to be of considerable promise. Each package contains a sufficient quantity for a preliminary trial, and where it is at all practicable the recipient is urged to use the seed for the production of stocks for future plantings. It is believed that if this practice is followed consistently it will result in a material improvement in the crops of the country.

Please make a full report on the inclosed blank regarding the results obtained with the seed.

#### DESCRIPTION.

The velvet bean is a vigorous-growing annual legume, making vines 20 to 75 feet in length, according to variety and conditions. It grows well on soils too light and sandy for most other legumes and produces an immense yield of forage, which is excellent feed for cattle and hogs. It also makes a very good hay if cut soon after the first flowers appear, but the vines are so long and tangled that harvesting is difficult. The velvet bean is excellent for newly cleared lands, as the growth is so rapid and dense that it smothers out the grass and brings the soil into a cultivable condition better than any other crop. It also has great value for green manuring and as a restorative for soils needing nitrogen and humus. Like other legumes, the velvet bean draws nitrogen from the air, the proportion of nitrogen contained in the plants being about the same as in cowpeas, and as the total yield is much greater the total amount of nitrogen and humus added to the soil is correspondingly larger. A crop of 3 tons contains as much nitrogen as a ton of cottonseed meal, while the amount of humus will be three times as great.

#### PLANTING.

Planting should not be done too early, but at about the same time as cotton, as the beans do not make a thrifty growth until the soil has become well warmed. One bushel of seed will plant 3 to 6 acres, according to variety and conditions. The vines should be given some sort of support to keep them up from the ground; otherwise, they will not fruit heavily or make the most vigorous growth. The



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velvet bean is usually planted with corn. The seed may be planted in the same row as the corn or in separate rows. Two rows of corn to one of beans is the most popular method of planting. The yield of corn may be decreased slightly by the beans, but the value of the beans for green-manure and feeding purposes will be much greater than the loss to the corn crop. Some strong-growing variety, like the Mexican June corn, will give all the needed support. The corn should be planted early and when about 2 feet high the beans are planted between the hills. After planting, the crop should be cultivated until the vines shade the ground. The vines make such a heavy growth that little corn can be gathered from the field, but when grazed little of the corn or beans will be lost. The only expense for growing the corn is the planting, and that will be more than repaid in the increased yield of the beans.

#### FEEDING VALUE.

The principal value of the velvet bean is for winter grazing, and for that purpose it is one of the best crops which can be grown on the light soils and in the long season of the immediate Gulf coast. It is usual to allow the crop to grow until killed by frost, after which it is grazed through the winter, as the vines and leaves decay so slowly that they retain their palatability a long time. The matured beans are quite hard when dry, but are eaten well in the fall, or whenever they become slightly softened either by rains or by lying on damp soil. The yield of seed from a fair growth of vines is usually from 20 to 30 bushels per acre, and much heavier yields are often secured. One hundred pounds of the pods will shell about 60 pounds, or 1 bushel, of seed. They do not need to be shelled for feeding cattle, and make an excellent grain feed for winter use. Experiments made at the Agricultural Experiment Station of Florida indicate that for feeding 3 pounds of the beans in the pods are worth more than 1 pound of cottonseed meal.

#### VARIETIES.

*Florida velvet bean.*—The Florida velvet bean is the best known and oldest cultivated variety. A late, vigorous grower, seldom maturing pods north of Atlanta. Flowers purple, pods black-hairy, 2 to 2½ inches long. Seeds nearly round, gray and brown marbled. One bushel will plant 4 to 6 acres. Plant about 5 feet apart.

*Lyon velvet bean.*—In growth and date of maturing much like the Florida velvet bean. Flowers white, pods 4 to 6 inches long, nearly smooth. Seeds large, flattened, white; yield 25 to 40 bushels per acre. One bushel will seed about 4 acres. Plant about 5 feet apart.

*Chinese velvet bean.*—Just like the Lyon bean, but about six weeks earlier. Vines not so large. Yield of beans very heavy. One bushel will seed 4 acres. Plant about 4 feet apart. This is the best early velvet bean known. Will mature in Tennessee and North Carolina.

*Yokohama velvet bean.*—The earliest variety, maturing as far north as Washington, D. C., ripening in about 100 days. Pods 4 to 6 inches long, with close gray hairs. Seeds large, flattened, gray. Yield of seed often 35 to 50 bushels an acre. One bushel will plant 3 acres. Plant about 3 feet apart.



*Georgia velvet bean.*—The Georgia velvet bean, Early Florida, or Hundred-Day Florida velvet bean, as it is sometimes called, is very similar to the original Florida velvet bean, except that it makes a much smaller vine and is much less prolific; but as it matures in about four months from planting it can be grown profitably as far north as Tennessee.

*Alabama velvet bean.*—This variety is very similar to the Georgia variety except that it makes a more vigorous growth and matures about six weeks later. The Alabama variety is best adapted to the country south of central Georgia, central Alabama, and central Mississippi. It is often grown under the names Early Florida, Early Speckled, and Hundred-Day velvet bean.

*Osceola velvet bean.*—A hybrid between the Lyon and Florida varieties that ripens much earlier than either. The pods are dark velvety, but strongly ridged on the sides. A vigorous, prolific variety, ripening in 150 to 160 days. Seeds large, mottled brown and white. Plant 4 to 5 feet apart. A popular, extensively grown variety.

*Bush or Bunch velvet bean.*—This is a nontwining variety of the velvet bean which has become very popular as a green-manure crop in orchards. It is also grown quite largely in corn, as the plants do not vine and weight down the corn, as do the twining sorts. The pod clusters are formed in a dense mass near the base of the plant. The Bush variety matures at about the same time as the Alabama, but the yield is less.

*Tracy velvet bean.*—This variety is a selection from a hybrid developed by the Office of Forage-Crop Investigations of the Bureau of Plant Industry. The Tracy makes a fairly vigorous growth of vine and requires less time for maturity than the Georgia variety. The pods are borne in pendent racemes, which often contain 18 or more pods. The black seeds are similar in size and shape to the Chinese velvet bean.

*Arlington velvet bean.*—The Arlington velvet bean is an early selection developed from the Georgia variety at the Arlington Experiment Farm, Va., by the Office of Forage-Crop Investigations of the Bureau of Plant Industry. In growth and yield it is very similar to the Georgia variety, but is more than a month earlier than this variety and also earlier than the Tracy variety. The seed is identical in color with the Georgia and Alabama varieties. The Arlington is especially suitable for early pasture and can be grown much farther north than any variety now on the market.

#### PUBLICATION AVAILABLE.

For further details regarding velvet beans, see Farmers' Bulletin 1276, entitled "The Velvet Bean," which will be sent free of charge upon application to the Secretary of Agriculture, Washington, D. C.

NOVEMBER 8, 1923.

